Concatenating Data

In this example we will loop through files containing each a year of data. We will then concatenate the data either along the time dimension (to compute the time average) or along a new dimension in order to compute statitistic between years (standard deviation, etc..)

```
import cdms, MV, genutil
import sys

pth=sys.prefix+'/sample_data/'

files = [ pth+'u_2000.nc',
          pth+'u_2001.nc',
          pth+'u_2002.nc',
         ]

for file in files:
    f=cdms.open(file)
Â Â Â  u=f('u')

Â Â Â  if file == files[0]:          # First file
Â Â Â      sh=list(u.shape)          # Create a list with the shape of the data
Â Â Â Â Â Â Â  sh.insert(0,1)             # Insert value 1 in front of the list
Â Â Â  Â Â Â  accumulation = u
Â Â Â Â Â Â Â  newdim = MV.reshape(u,sh) # Create a new 1D dimension

Â Â Â  else:
        # add u at the end of accumaltion on dimension 0
        accumulation = MV.concatenate((accumulation,u))
Â Â Â Â Â Â Â  tmp = MV.reshape(u,sh)                # Create a new 1D dimension
Â Â Â Â Â Â Â  newdim = MV.concatenate((newdim,tmp)) # Add u to the newdim over the new dimension

Â Â Â  f.close()


print accumulation.shape   # All time added over the same dimension
print newdim.shape         # Has a new dimension for years

avg = MV.average(accumulation)
std = genutil.statistics.std(newdim)

print avg.shape
print std.shape
```